

**Work Order ID 114520**

Friday, March 07, 2014 9:20:59 AM

**\*114520\***

Page 1

Item ID: D3391-025

Accept

**\*N900040100\***Setup Start **\*NS1\***

Revision ID:

Stop **\*NS2\***

Item Name: Aft Tube Assembly

Start Date: 3/7/2014 Start Qty: 1.00

**\*1\***

Cust Item ID:

Required Date: 3/14/2014 Req'd Qty: 1.00

**\*1\***

Customer:

Reference:

Approvals:

Process Plan:

Date: 4-03-7

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run Start **\*NR1\***Stop **\*NR2\***Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool # Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

Draw Nbr

Revision Nbr

D3391

I

100

0.00

**\*100\***

MORI SEIKI CNC LATHE LARGE

Mori Seiki

Memo

0.00

Mori Seiki CNC Lathe Large

Turn as per Folio-FA599

Rev: AA &amp; Dwg D3391 Rev: 1

110

0.00

**\*110\***

QC2- Inspect parts off machine FAI/FAIB

QC

Memo

0.00

Quality Control

112

0.00

**\*112\***

QC5- Inspect part completeness to step on W/O

QC

Memo

0.00

Quality Control

5/11/12

KC  
mm L  
14/03/08mm L  
14/03/08

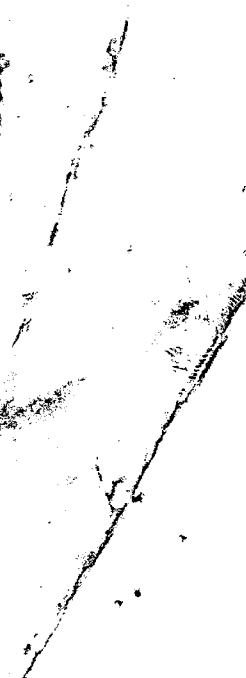
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## Quality Control

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000  
000  
000



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Item ID: D3391-025

Accept

\*N900040100\*

Setup Start \*NS1\*

Revision ID:

Stop \*NS2\*

Item Name: Aft Tube Assembly

Start Date: 3/7/2014 Start Qty: 1.00

\*1\*

Cust Item ID:

Required Date: 3/14/2014 Req'd Qty: 1.00

\*1\*

Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start \*NR1\*

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop \*NR2\*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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150

0.00

\*150\*

Skidtubes

Skidtubes

Memo

0.00

Skidtubes

1-Drill (PILOT HOLE) aft cap holes per Dwg D3391 using DT8803

DC 14/04/29

160

0.00

\*160\*

BENDING MACHINE - SKIDTUBES

CNC Bend 1

Memo

0.00

CNC Delta 100 Bender

Form as per Dwg D3391 Using Bend Prog 3391025

DC 14/04/29

170

QC5- Inspect part completeness to step on W/O

0.00

\*170\*

QC

Memo

0.00

Quality Control

DAS  
03  
9-89

DP 14-4-29

H-4.27



1/11/19

1/11/19

1/11/19

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Item ID: D3391-025

Accept

**\*N900040100\***Setup Start **\*NS1\***

Revision ID:

Stop **\*NS2\***

Item Name: Aft Tube Assembly

Start Date: 3/7/2014 Start Qty: 1.00

**\*1\***

Cust Item ID:

Required Date: 3/14/2014 Req'd Qty: 1.00

**\*1\***

Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start **\*NR1\***

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

180

0.00

**\*180\***

Skidtubes

Skidtubes

Memo

0.00

Skidtubes

1-Open Aft cap pilot hole to .208" as per Dwg D3391

2-Drill float bag holes using DT8809 as per Dwg D3391(Holes marked "A" Only.

3-Drill wearplate holes as per Dwg D3391 using DT8878(Mid Tube) & DT8217  
Wearplate Jig .

\*\*\*\*\*Do Not Open To Finished Size\*\*\*\*\*

4-Drill Wearshoe holes as per DWG D3391 using DT8939 locating from 2  
previously drilled aft wearplate holes.

5-Open wearplate holes to 0.297" and c'bore as per dwg D3391

6-Open up all float bag holes to 0.328" and c'sink as per Dwg D3391.

7-Deburr

8- Scribe batch # on fwd end

DC 14/05/13

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Item ID: D3391-025 Accept **\*N900040100\*** Setup Start **\*NS1\***  
Revision ID: Stop **\*NS2\***  
Item Name: Aft Tube Assembly  
Start Date: 3/7/2014 Start Qty: 1.00 **\*1\*** Cust Item ID:  
Required Date: 3/14/2014 Req'd Qty: 1.00 **\*1\*** Customer:  
Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_ Run Start **\*NR1\***  
QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_ Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
220	Skidtubes	0.00							
<b>*220*</b>	Skidtubes	0.00							
Skidtubes	<b>Memo</b> 1- Instal spacers as per dwg D3391 A/R Magnabond 6398 Batch: <u>129127</u> exp. date: <u>14/12/30</u> cure time 12hrs as per QSI0015  2- Grind crossbolts flush  3- Back drill using #9 drill  4- Touchup Magnabond  5- Deburr								
230	QC5- Inspect part completeness to step on W/O	0.00							
<b>*230*</b>	QC	0.00							
Quality Control	<b>Memo</b>								

DC 14/05/14

DC 14/05/15

SM 4/5/21

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Item ID: D3391-025      Accept      **\*N900040100\***      Setup Start **\*NS1\***  
Revision ID:      Stop **\*NS2\***  
Item Name: Aft Tube Assembly  
Start Date: 3/7/2014      Start Qty: 1.00      **\*1\***      Cust Item ID:  
Required Date: 3/14/2014      Req'd Qty: 1.00      **\*1\***      Customer:  
Reference:

Approvals:      Process Plan:      Date:      Tooling:      Date:      Run Start **\*NR1\***  
QC:      Date:      SPC (Y/N):      Date:      Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
235	Pressure Wash per QSI005 4.3	0.00							
<b>*235*</b>									
HandFinish	Memo	0.00							
Hand Finishing	AND REALODINE AS PER PAR09-043								
240	White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum	0.00							
<b>*240*</b>									
Powdercoat	Memo	0.00							
Powder Coating	START TIME: 2:25 OVEN TEMPERATURE: 220 FINISH TIME: 3:00								
250	QC3- Inspect Part Finish	0.00							
<b>*250*</b>									
QC	Memo	0.00							
Quality Control									

DAS  
34  
9-89DAS  
15  
9-89



# Work Order ID 114520

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Item ID: D3391-025 Accept \*N900040100\* Setup Start \*NS1\*  
Revision ID: Stop \*NS2\*  
Item Name: Aft Tube Assembly  
Start Date: 3/7/2014 Start Qty: 1.00 \*1\* Cust Item ID:  
Required Date: 3/14/2014 Req'd Qty: 1.00 \*1\* Customer:  
Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_ Run Start \*NR1\*  
QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_ Stop \*NR2\*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
260		0.00							
*260*	HandFinishing					1x	d	all	1409/16
HandFinish	Memo	0.00							
Hand Finishing	1-Install inserts as per Dwg D3391 2-Install Aft Cap as per Dwg D3391 A/ R Sikaflex-241/-291 <u>M129457</u> Sikaflex expiry date: <u>1411</u>  3- INSTALL WEARPLATES AS PER DWG								
270	QC5- Inspect part completeness to step on W/O	0.00				1			DAS 38 9-89 14-
*270*									
QC	Memo	0.00							
Quality Control									
280	Identify as per dwg & Stock Location: <u>w/o</u>	0.00							
*280*									
Packaging	Memo	0.00				1x	d	all	1409/16
Packaging									

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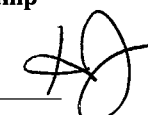
**\*114520\***

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Item ID: D3391-025 Accept **\*N900040100\*** Setup Start **\*NS1\***  
Revision ID: Stop **\*NS2\***  
Item Name: Aft Tube Assembly  
Start Date: 3/7/2014 Start Qty: 1.00 **\*1\*** Cust Item ID:  
Required Date: 3/14/2014 Req'd Qty: 1.00 **\*1\*** Customer:  
Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_ Run Start **\*NR1\***  
QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_ Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
290	QC21- Final Inspection - Work Order Release	0.00							
<b>*290*</b>									
QC	Memo	0.00							
Quality Control									

14/9/16   
mvp  
14-9-11

# Picklist Print

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Page 1

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Work Order ID: 114520

\*114520\*

Parent Item: D3391-025

\*D3391-025\*

Parent Item Name: Aft Tube Assembly

Start Date: 3/7/2014

Required Date: 3/14/2014

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP Rev B 06-02-07 ECN773 dwg rev. D EC  
IPP Rev:C 06-03-28 Update Manuf. Instructions JLM  
IPP rev D 07.03.20 revF dwg EC  
IPP rev E 07.11.07 rev G dwg ecn 1053p EC verified by: DD  
IPP Rev:F 07-11-13 ECN 1056 DD verified by: EC  
IPP Rev:G 08-09-10 revH as per dwg DD verified by:EC IPP Rev:H  
11.11.14 AS PER REV.I DD verified by:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

D4095-047		Manufactured	No			260	Each	18.0000	1	1			
<b>*D4095-047*</b>													
Wearpad Assembly													

Location	Loc Qty	Loc Code
FP001	18	
102241	2	
108289	16	

D4095-049		Manufactured	No			260	Each	13.0000	1	1			
<b>*D4095-049*</b>													
Wearpad Assembly													

Location	Loc Qty	Loc Code
FP001	12	
109670	12	
FP002	1	
102216	1	

D6014-090		Manufactured	No			100	Each	74.0000	1	1			
<b>*D6014-090*</b>													
ALUMINUM EXTRUSION													

Location	Loc Qty	Loc Code
LG003	74	
79742	17	
86063	57	

Kc 14-3-07

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Work Order ID: 114520

\*114520\*

Parent Item: D3391-025

\*D3391-025\*

Parent Item Name: Aft Tube Assembly

Start Date: 3/7/2014

Required Date: 3/14/2014

Start Qty: 1.00

Required Qty: 1.00

D3670-4-200

Manufactured No

230

Each

337.0000

4

4

\*D3670-4-200\*

Bushing

\*\*

02/14/05/14

Location

Loc Qty

Loc Code

FG

10

87709

10

LG001

327

103880

60

109108

242

96240

25

D2646

Manufactured No

270

Each

61.0000

1

1

\*D2646\*

Aft Cap

\*\*

lll 2/10/10

Location

Loc Qty

Loc Code

FG

4

85848

2

90495

2

FP001

57

103306

18

107857

1

110816

38

B119656

vi

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Work Order ID: 114520

**\*114520\***

Parent Item: D3391-025

**\*D3391-025\***

Parent Item Name: Aft Tube Assembly

Start Date: 3/7/2014

Required Date: 3/14/2014

Start Qty: 1.00

Required Qty: 1.00

D3672-1

Manufactured No

270

Each

1,676.000

2

2

**\*D3672-1\***

Phenolic Washer

**\*\***

*el 14/09/10*

Location

Loc Qty

Loc Code

FG	10
85222	10
ST060	1666
103845	4
112218	500
<u>113581</u>	500
93886	450
99099	212

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
*x2*  
\_\_\_\_\_  
\_\_\_\_\_

ALS4-1032-130

AELS4-1032-130 Purchased

No

260

Each

1,136.000

14

14

**\*AI S4-1032-130\***

Rivnut

**\*\***

*el 14/09/10*

Location

Loc Qty

Loc Code

ST279	1079
M128179	122
M128211	957
st510	57
M126109	57

*M128649*

*x14*  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

ALS4-1032-225

AELS8-1032-225 Purchased

No

270

Each

992.0000

8

8

**\*AI S4-1032-225\***

Rivnut

**\*\***

*el 14/09/10*

Location

Loc Qty

Loc Code

FG	30
M127028	30
ST280	928
M127028	10
M128179	918
st555	34
M127092	34

*M128649?*

*x8*  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

# Picklist Print

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Work Order ID: 114520

**\*114520\***

Parent Item: D3391-025

**\*D3391-025\***

Parent Item Name: Aft Tube Assembly

Start Date: 3/7/2014

Required Date: 3/14/2014

Start Qty: 1.00

Required Qty: 1.00

AN3C4A Purchased No

270 Each 2,081.000 6 6

**\*AN3C4A\***

Bolt

\*\*

lll 11/09/10

Location

Loc Qty

Loc Code

FG 122814

20 20

M129520

x6

ST512

3 3

124221

3

ST513

2058

125388

1835

M127410

1

M127832

222

AN3C5A Purchased No

270 Each 1,089.000 4 4

**\*AN3C5A\***

Bolt

\*\*

lll 11/09/10

Location

Loc Qty

Loc Code

FG 122800

5 5

M1129913

x4

ST350

1084

M128057

1084

NAS1149C0332R Purchased No

270 Each 7,672.000 10 10

**\*NAS1149C0332R\***

WASHER

\*\*

lll 11/09/10

Location

Loc Qty

Loc Code

GA 125654

1101 1101

st510

6571

m126319

61

m127306

2500

m127410

3000

m127831

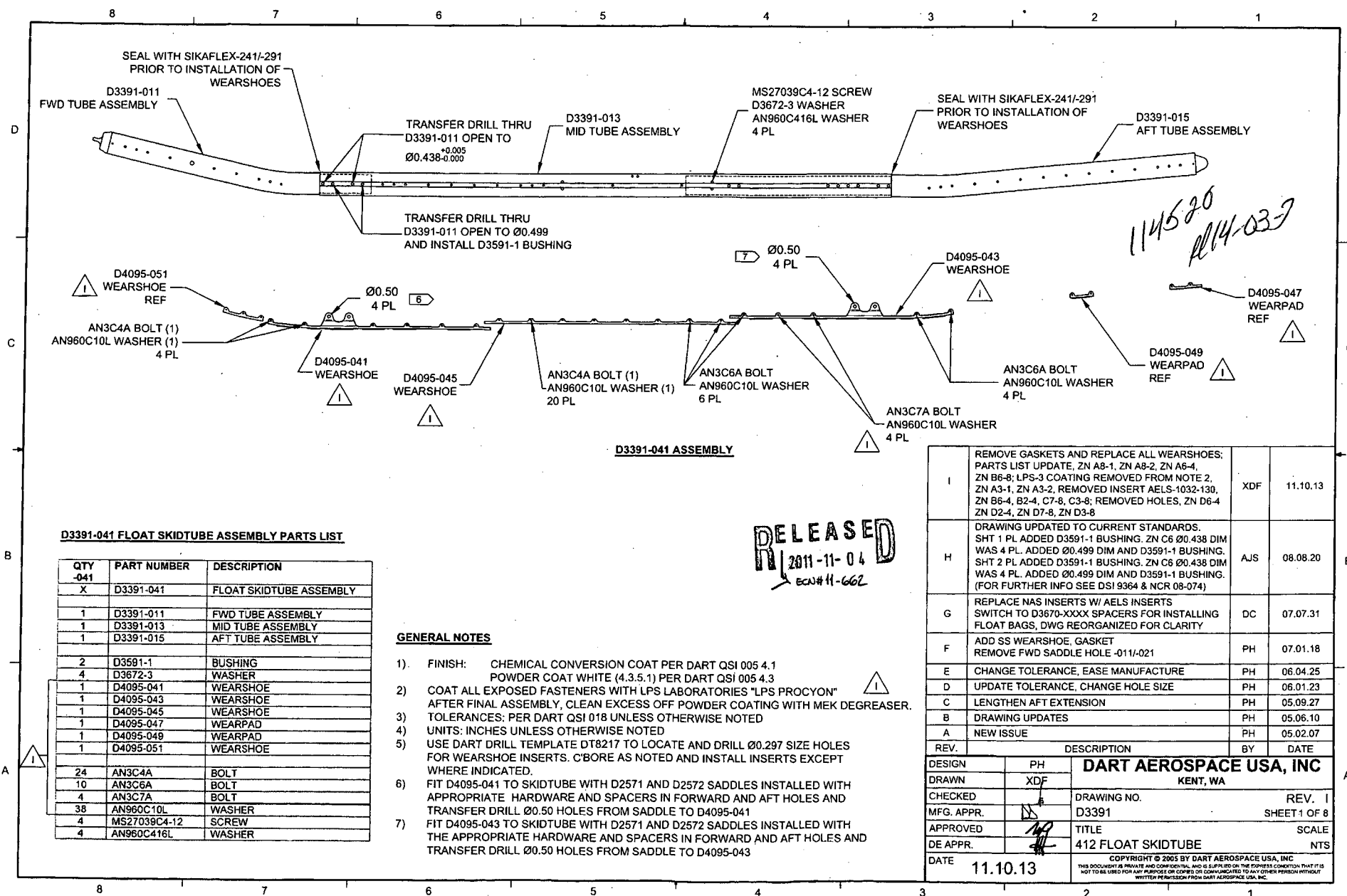
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x10

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Shop Packet Print

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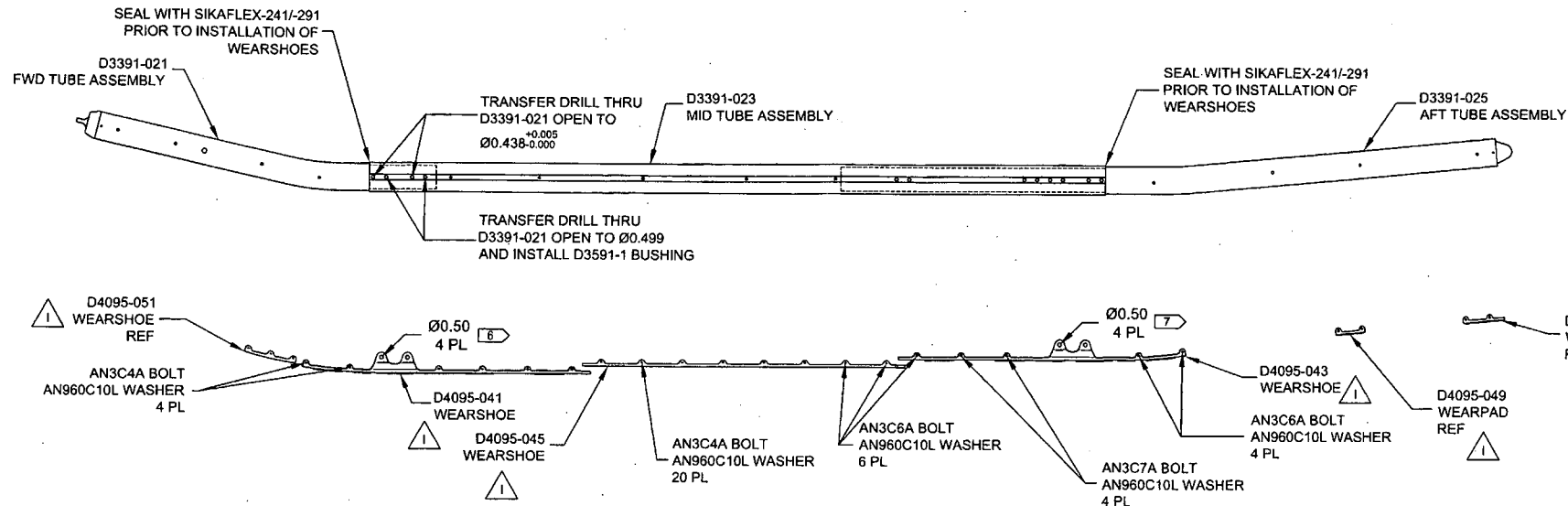
**D3391-041 FLOAT SKIDTUBE ASSEMBLY PARTS LIST**

QTY	PART NUMBER	DESCRIPTION
-041		
X	D3391-041	FLOAT SKIDTUBE ASSEMBLY
1	D3391-011	FWD TUBE ASSEMBLY
1	D3391-013	MID TUBE ASSEMBLY
1	D3391-015	AFT TUBE ASSEMBLY
2	D3591-1	BUSHING
4	D3672-3	WASHER
1	D4095-041	WEARSHOE
1	D4095-043	WEARSHOE
1	D4095-045	WEARSHOE
1	D4095-047	WEARSHOE
1	D4095-049	WEARSHOE
1	D4095-051	WEARSHOE
24	AN3C4A	BOLT
10	AN3C6A	BOLT
4	AN3C7A	BOLT
38	AN960C10L	WASHER
4	MS27039C4-12	SCREW
4	AN960C416L	WASHER

**GENERAL NOTES**

- 1) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1  
POWDER COAT WHITE (4.3.5.1) PER DART QSI 005 4.3
- 2) COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES "LPS PROCYON"  
AFTER FINAL ASSEMBLY, CLEAN EXCESS OFF POWDER COATING WITH MEK DEGREASER.
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) USE DART DRILL TEMPLATE DT8217 TO LOCATE AND DRILL Ø0.297 SIZE HOLES  
FOR WEARSHOE INSERTS. C'BORE AS NOTED AND INSTALL INSERTS EXCEPT  
WHERE INDICATED.
- 6) FIT D4095-041 TO SKIDTUBE WITH D2571 AND D2572 SADDLES INSTALLED WITH  
APPROPRIATE HARDWARE AND SPACERS IN FORWARD AND AFT HOLES AND  
TRANSFER DRILL Ø0.50 HOLES FROM SADDLE TO D4095-041
- 7) FIT D4095-043 TO SKIDTUBE WITH D2571 AND D2572 SADDLES INSTALLED WITH  
THE APPROPRIATE HARDWARE AND SPACERS IN FORWARD AND AFT HOLES AND  
TRANSFER DRILL Ø0.50 HOLES FROM SADDLE TO D4095-043

I	REMOVE GASKETS AND REPLACE ALL WEARSHOES; PARTS LIST UPDATE, ZN A8-1, ZN A8-2, ZN A8-4, ZN B6-8; LPS-3 COATING REMOVED FROM NOTE 2, ZN A3-1, ZN A3-2, REMOVED INSERT AELS-1032-130, ZN B6-4, B2-4, C7-8, C3-8; REMOVED HOLES, ZN D6-4 ZN D2-4, ZN D7-8, ZN D3-8	XDF	11.10.13
H	DRAWING UPDATED TO CURRENT STANDARDS. SHT 1 PL ADDED D3591-1 BUSHING. ZN C6 Ø0.438 DIM WAS 4 PL. ADDED Ø0.499 DIM AND D3591-1 BUSHING. SHT 2 PL ADDED D3591-1 BUSHING. ZN C6 Ø0.438 DIM WAS 4 PL. ADDED Ø0.499 DIM AND D3591-1 BUSHING. (FOR FURTHER INFO SEE DSI 9364 & NCR 08-074)	AJS	08.08.20
G	REPLACE NAS INSERTS W/ AELS INSERTS SWITCH TO D3670-XXXX SPACERS FOR INSTALLING FLOAT BAGS, DWG REORGANIZED FOR CLARITY	DC	07.07.31
F	ADD SS WEARSHOE, GASKET REMOVE FWD SADDLE HOLE -011/021	PH	07.01.18
E	CHANGE TOLERANCE, EASE MANUFACTURE	PH	06.04.25
D	UPDATE TOLERANCE, CHANGE HOLE SIZE	PH	06.01.23
C	LENGTHEN AFT EXTENSION	PH	05.09.27
B	DRAWING UPDATES	PH	05.06.10
A	NEW ISSUE	PH	05.02.07
REV.	DESCRIPTION	BY	DATE
DESIGN	PH		
DRAWN	XDF		
CHECKED			
MFG. APPR.			
APPROVED			
DE APPR.			
DATE	11.10.13		
<b>DART AEROSPACE USA, INC</b> KENT, WA DRAWING NO. D3391 REV. I SHEET 1 OF 8 TITLE 412 FLOAT SKIDTUBE SCALE NTS <small>COPYRIGHT © 2005 BY DART AEROSPACE USA, INC THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.</small>			



**D3391-043 ASSEMBLY**

**D3391-043 FLOAT SKIDTUBE ASSEMBLY PARTS LIST**

QTY -043	PART NUMBER	DESCRIPTION
X	D3391-043	FLOAT SKIDTUBE ASSEMBLY
1	D3391-021	FWD TUBE ASSEMBLY
1	D3391-023	MID TUBE ASSEMBLY
1	D3391-025	AFT TUBE ASSEMBLY
2	D3591-1	BUSHING
1	D4095-041	WEARSHOE
1	D4095-043	WEARSHOE
1	D4095-045	WEARSHOE
1	D4095-047	WEARPAD
1	D4095-049	WEARPAD
1	D4095-051	WEARSHOE
24	AN3C4A	BOLT
10	AN3C6A	BOLT
4	AN3C7A	BOLT
38	AN960C10L	WASHER

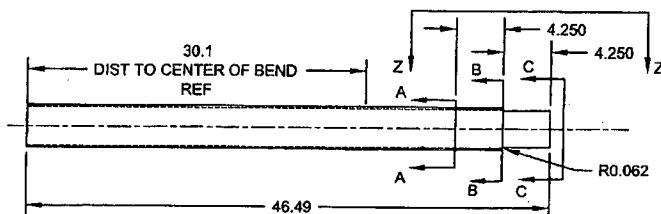
**GENERAL NOTES**

- 1) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1  
POWDER COAT WHITE (4.3.5.1) PER DART QSI 005 4.3
- 2) COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES "LPS PROCYON"  
AFTER FINAL ASSEMBLY, CLEAN EXCESS OFF POWDER COATING WITH MEK DEGREASER.
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) USE DART DRILL TEMPLATE DT8217 TO LOCATE AND DRILL Ø0.297 SIZE HOLES FOR WEARSHOE INSERTS. C'BORE AS NOTED AND INSTALL INSERTS EXCEPT WHERE INDICATED.
- 6) FIT D4095-041 TO SKIDTUBE WITH D2571 AND D2572 SADDLES INSTALLED WITH APPROPRIATE HARDWARE AND SPACERS IN FORWARD AND AFT HOLES AND TRANSFER DRILL Ø0.50 HOLES FROM SADDLE TO D4095-041
- 7) FIT D4095-043 TO SKIDTUBE WITH D2571 AND D2572 SADDLES INSTALLED WITH THE APPROPRIATE HARDWARE AND SPACERS IN FORWARD AND AFT HOLES AND TRANSFER DRILL Ø0.50 HOLES FROM SADDLE TO D4095-043

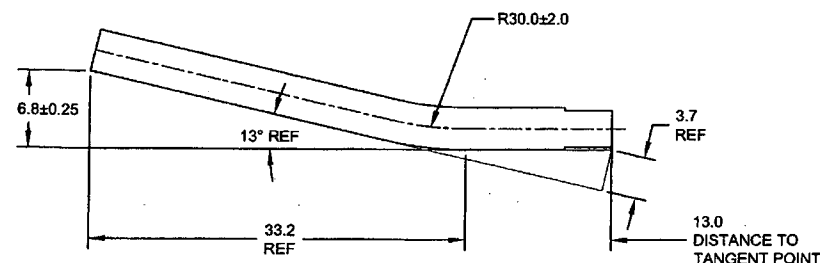
RELEASED  
2011-11-04

DESIGN	PH	<b>DART AEROSPACE USA, INC</b>	
DRAWN	XDF	KENT, WA	
CHECKED		DRAWING NO.	REV. 1
MFG. APPR.		D3391	SHEET 2 OF 8
APPROVED		TITLE	SCALE
DE APPR.		412 FLOAT SKIDTUBE	NTS
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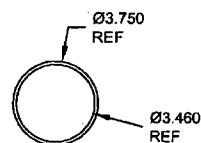




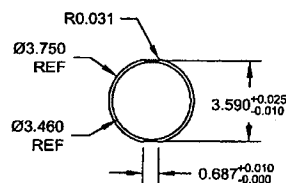
**D3391-1 CUTTING DETAIL**  
(MAKE FROM D6013-047 SKIDTUBE MATERIAL)



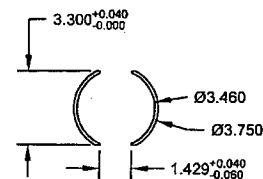
**D3391-011/-021 BENDING DETAIL**  
(MAKE FROM D3391-1)



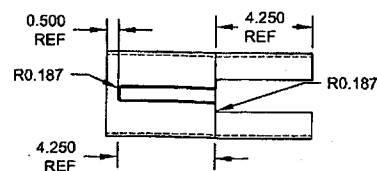
**SECTION A-A**  
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**SECTION B-B**  
SCALE 2X



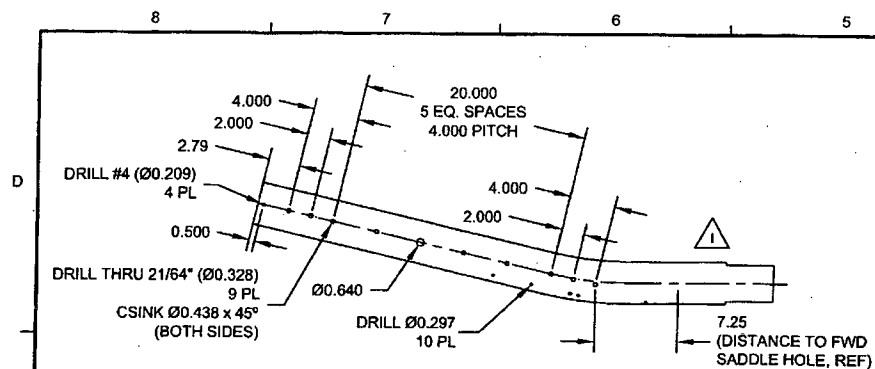
**SECTION C-C**  
SCALE 2X



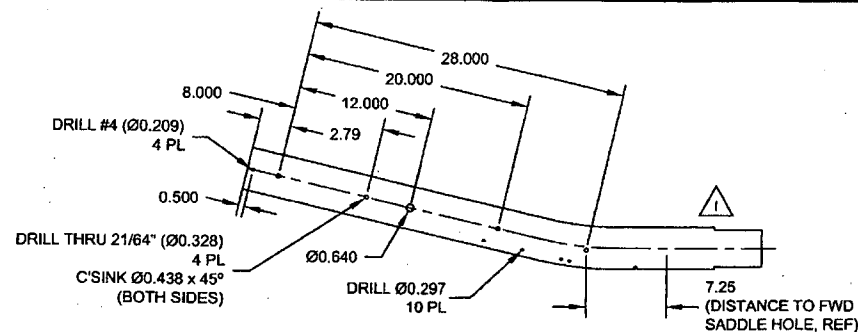
**VIEW Z-Z**  
SCALE 2X

RELEASED  
2011-11-04

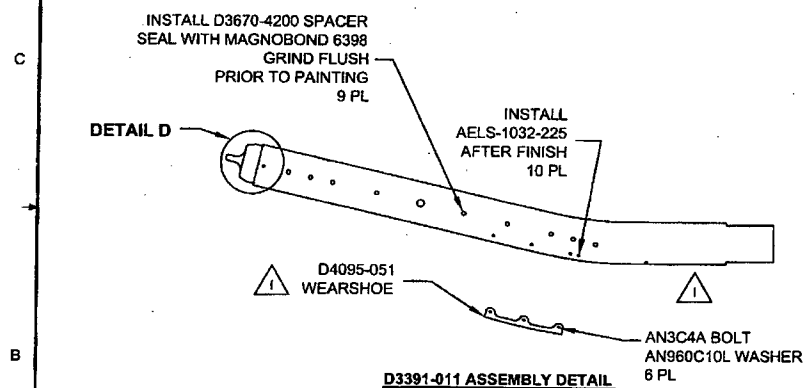
DESIGN	PH	<b>DART AEROSPACE USA, INC</b>	
DRAWN	XDF	KENT, WA	
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MFG. APPR.			SHEET 3 OF 8
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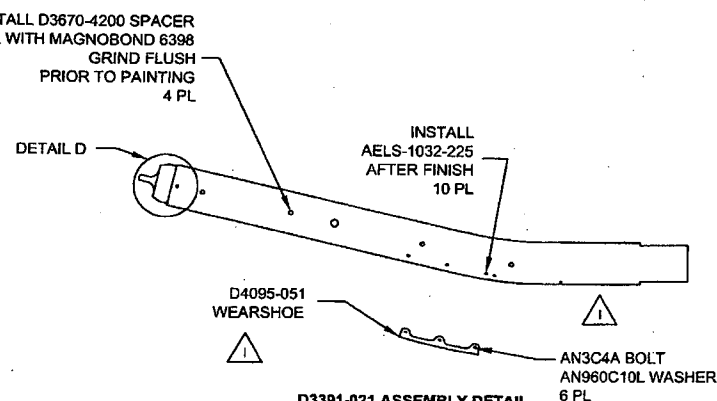
**D3391-011 DRILLING DETAIL**



**D3391-021 DRILLING DETAIL**



**D3391-011 ASSEMBLY DETAIL**

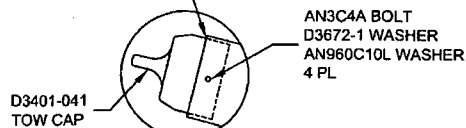


**D3391-021 ASSEMBLY DETAIL**

**D3391-011/-021 FWD TUBE ASSEMBLY PARTS LIST**

QTY - 011	QTY - 021	PART NUMBER	DESCRIPTION
X		D3391-011	FWD TUBE ASSEMBLY
	X	D3391-021	FWD TUBE ASSEMBLY
1	1	D3401-041	TOW CAP
9	4	D3670-4200	SPACER
4	4	D3672-1	WASHER
1	1	D4095-051	WEARSHOE
1	1	D6013-047	FWD TUBE
10	10	AN3C4A	BOLT
10	10	AN960C10L	WASHER
10	10	AELS-1032-225	INSERT

SEAL WITH  
SIKAFLEX-241/-291

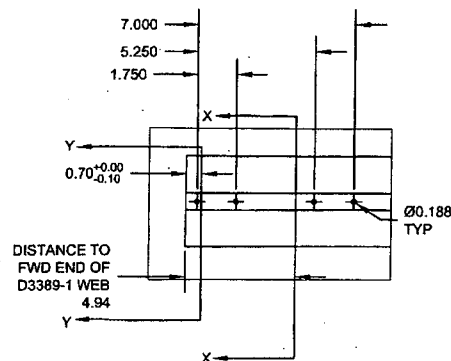


**DETAIL D  
SCALE 2X**

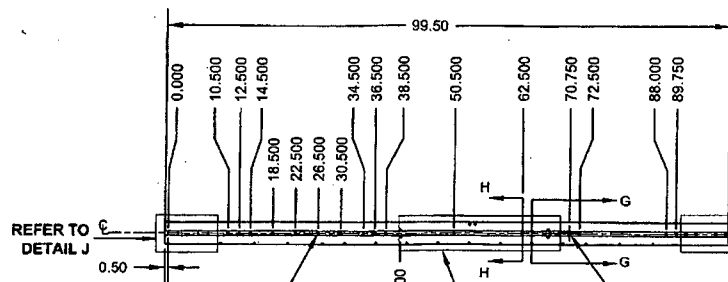
**RELEASED**  
2011-11-04

DESIGN	PH	<b>DART AEROSPACE USA, INC</b>	
DRAWN	XDF	KENT, WA	
CHECKED		DRAWING NO. D3391	REV. 1
MFG. APPR.			SHEET 4 OF 8
APPROVED		TITLE 412 FLOAT SKIDTUBE	SCALE NTS
DE APPR.			
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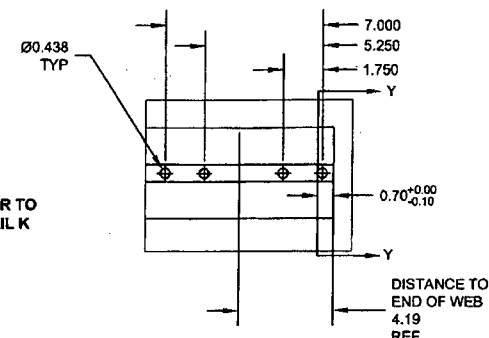
8 7 6 5 4 3 2 1



**DETAIL J**  
SCALE 4X



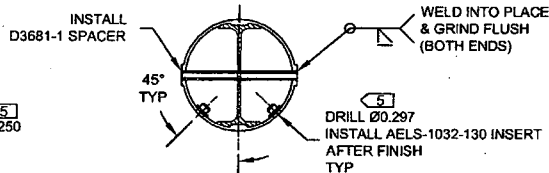
**D3391-013 ASSEMBLY DETAIL**



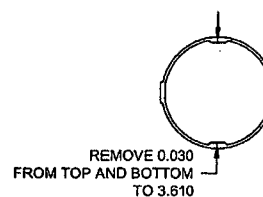
**DETAIL K**  
SCALE 4X



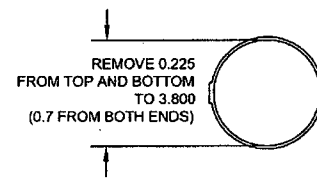
**SECTION G-G**  
SCALE 5X



**SECTION H-H**  
SCALE 5X



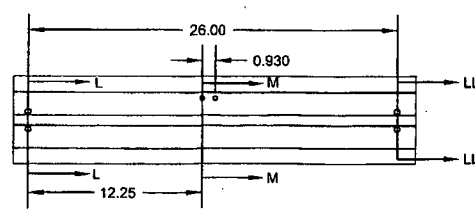
**SECTION X-X**  
SCALE 5X



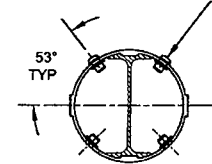
**SECTION Y-Y**  
SCALE 5X

**D3391-013 MID TUBE ASSEMBLY PARTS LIST**

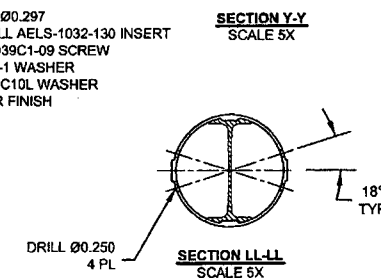
QTY -013	PART NUMBER	DESCRIPTION
X	D3391-013	MID TUBE ASSEMBLY
1	D2500-1-100	EXTRUSION
1	D3389-1	WEB
4	D3672-1	WASHER
4	D3672-3	WASHER
12	D3681-1	SPACER
24	AELS-1032-130	INSERT
4	ALS4-428-165	INSERT
4	AN960C10L	WASHER
4	AN960C416L	WASHER
4	MS27039C1-09	SCREW
4	MS27039C4-08	SCREW



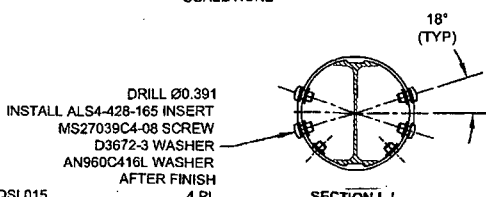
**DETAIL E**  
SCALE NONE



**SECTION M-M**  
SCALE 5X



**SECTION LL-LL**  
SCALE 5X



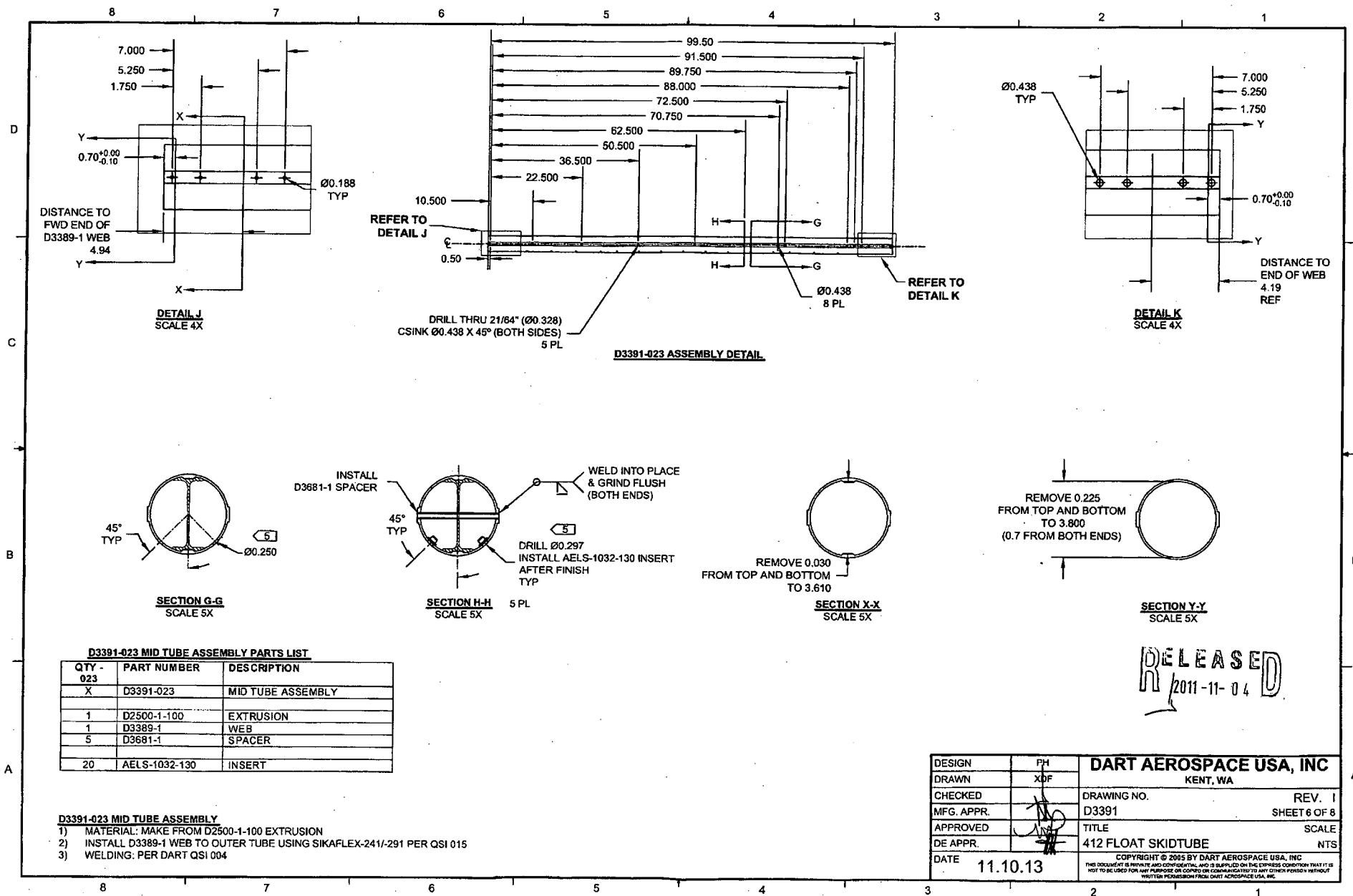
**SECTION L-L**  
SCALE 5X

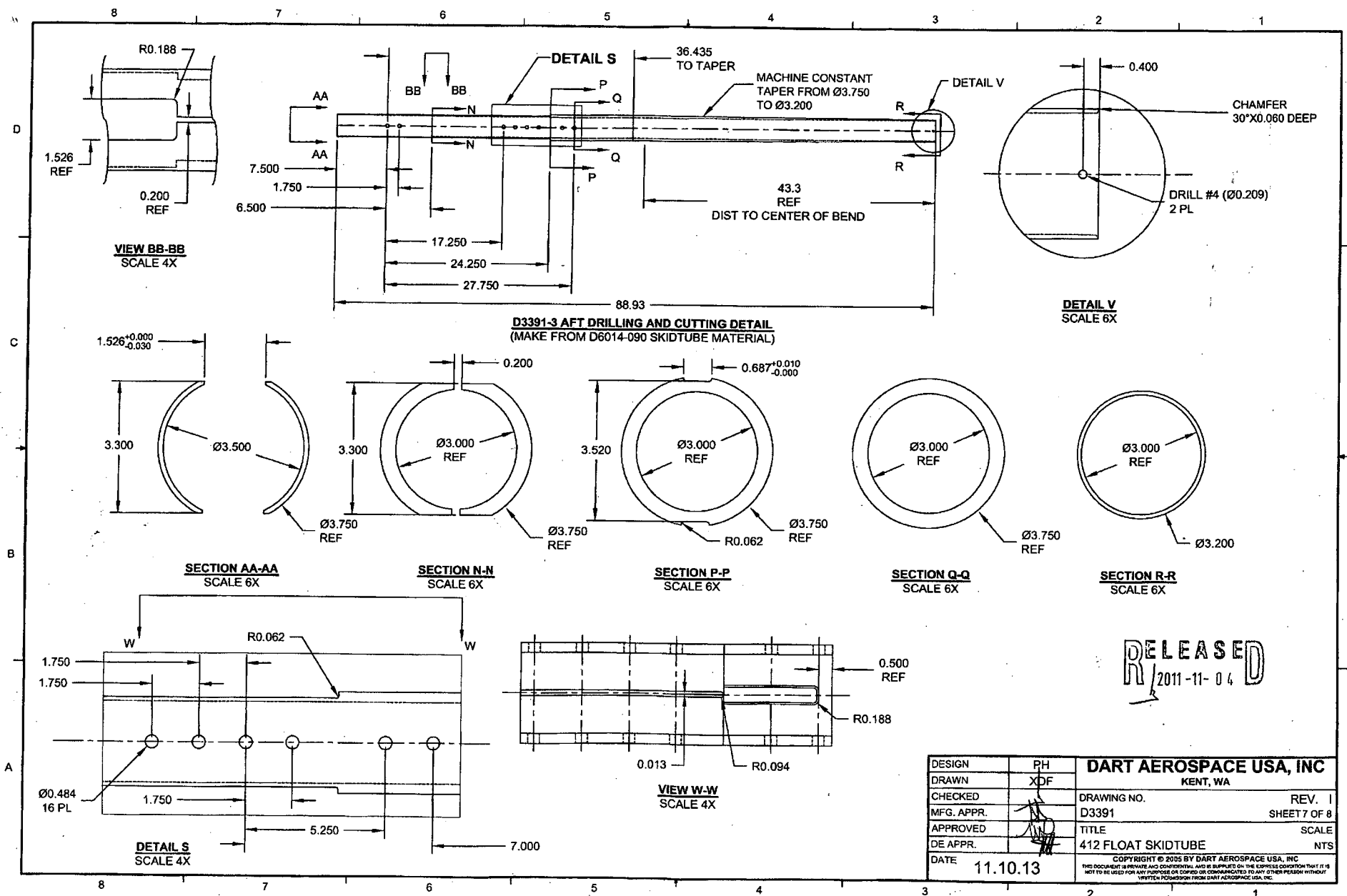
**D3391-013 MID TUBE ASSEMBLY**

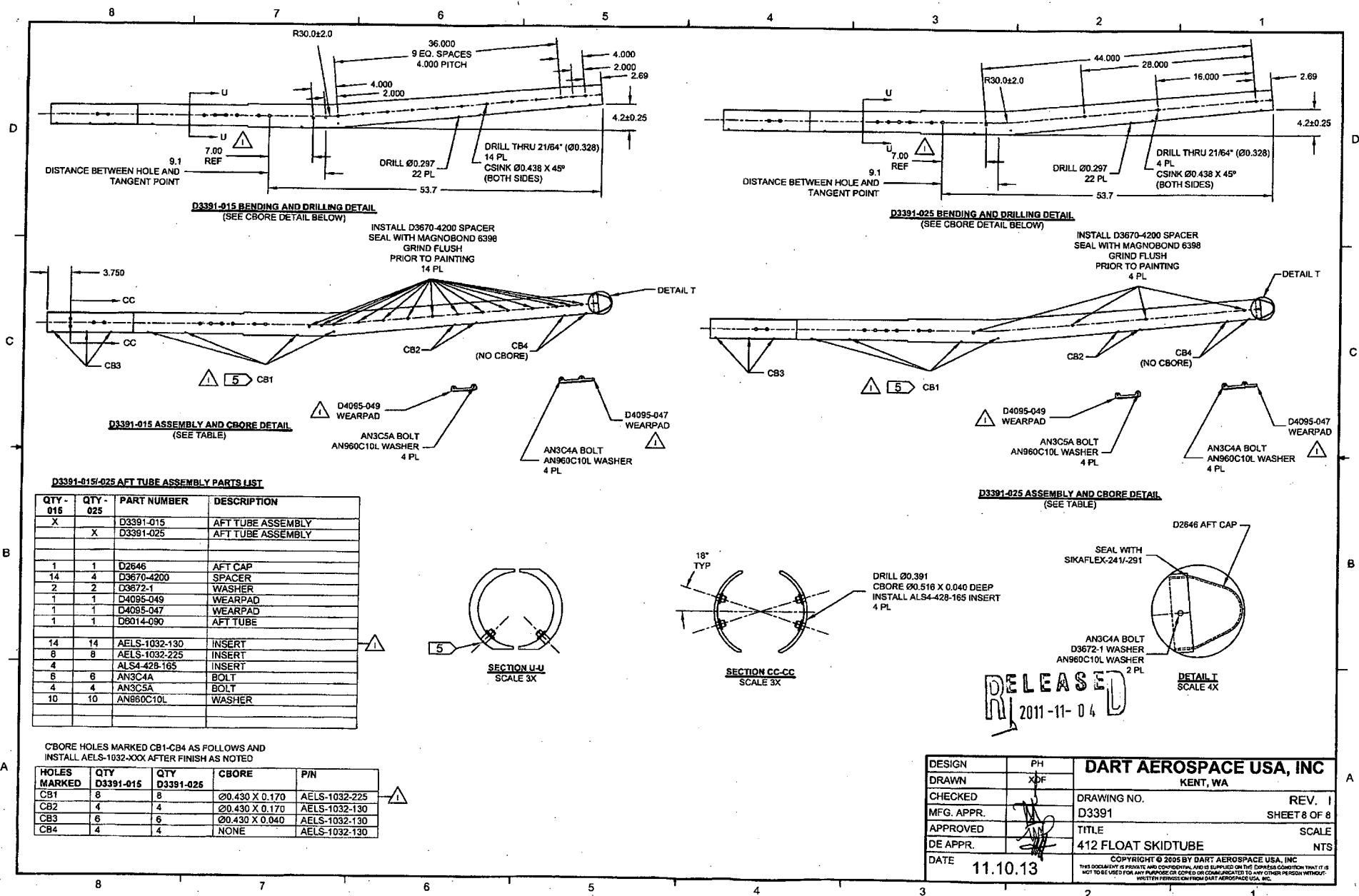
- MATERIAL: MAKE FROM D2500-1-100 EXTRUSION
- INSTALL D3389-1 WEB TO OUTER TUBE USING SIKAFLEX-241/291 PER QSI 015
- WELDING: PER DART QSI 004

RELEASED  
2011-11-04

DESIGN	PH	<b>DART AEROSPACE USA, INC</b>	
DRAWN	XDF	KENT, WA	
CHECKED		DRAWING NO. D3391	REV. I
MFG. APPR.		SHEET 5 OF 8	
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DE APPR.		412 FLOAT SKIDTUBE	NTS
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<b>DART AEROSPACE LTD</b>		<b>Work Order:</b>	
<b>Description:</b> Float Skidtube (412)		<b>Part Number:</b>	<b>D3391-3</b>
<b>Inspection Dwg:</b> D3391	<b>Rev:</b> I	<b>Page 1 of 1</b>	

### FIRST ARTICLE INSPECTION CHECKLIST

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
<b>Lathe Section</b>						
14.000	+/-0.010	14.00	/		tape	LG-25
3.500	+/-0.010	3.500	/		vern	cnc-08
Ø3.200	+/-0.010	3.203	/		"	
Ø3.750	+/-0.010	3.750	/		"	
30° x 0.060 chamfer	+/-0.010	30°X.060	/		"	
88.93	+/-0.030	88.93	/		tape	LG-25

<b>Measured by:</b> <i>KL/2000.1</i>	<b>Date:</b> <i>14/03/08</i>
<b>Audited by:</b> <i>SMH</i>	<b>Date:</b> <i>14/5/12</i>

<b>HAAS Section</b>						
1.526	+0.000/-0.030	1.514	/		Vern	ML-010
7.500	+/-0.010	7.500	/		"	
27.750	+/-0.010	27.750	/		M-tape	ML-08
31.750	+/-0.010	31.750	/		"	
35.250	+/-0.010	35.250	/		"	
3.300	+/-0.010	3.303	/		Vern	ML-06
0.200	+/-0.010	.200	/		"	
3.520	+/-0.010	3.523	/		"	
0.687	+0.010/-0.000	.690	/		"	
R0.062	+/-0.010	R0.062	/		R-6	
Ø0.484	+0.005/-0.001	Ø.484	/		Vern	

<b>Measured by:</b> <i>CMZ</i>	<b>Date:</b> <i>14/04/27</i>
<b>Audited by:</b> <i>PK</i>	<b>Date:</b> <i>14/04/27</i>

Rev	Date	Change	Revised by	Approved
A	06.04.24	New Issue P/O D3391-015/-025	KJ/JLM	
B	06.06.19	Dwg revision update	KJ/JLM	
C	07.04.20	Ø0.208 dimension removed	KJ/JLM	
D	07.09.06	0.400 dimension removed	KJ/JLM	
E	07.11.23	Dwg Rev. updated	KJ/EC/DD	
F	09.04.27	Dimensions updated per Rev H and NCR09-028	KJ/JLM	
G	09.11.16	Dimension 0.200 removed	KJ	
H	11.06.21	Dimension 44.995 removed	KJ	
I	12.05.15	Dwg Rev updated	KJ	
J	12.05.23	Dimension updated	KJ	
K	12.10.15	88.93 dimension removed	KJ	
L	12.11.28	88.93 dimension added	KJ	<i>MA</i>



DQA: \_\_\_\_\_ Date: \_\_\_\_\_

## WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order update only ☐

Work Order: _____  Part No. _____  NCR No. _____	<b>DISPOSITION</b>  Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Suspected Unapproved <input type="checkbox"/>	<b>AGAINST DEPARTMENT/PROCESS</b>  <table style="width: 100%;"> <tr> <td>Skid-tube <input type="checkbox"/></td> <td>Crosstube <input type="checkbox"/></td> <td>Water Jet <input type="checkbox"/></td> <td>Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>	
Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>															
Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>															
Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>															
Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>																

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief-Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

### FAULT CATEGORY

<b>Landing Gear</b> <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric <input type="checkbox"/> Cracks <input type="checkbox"/> Crimp/Kink/Ripple/Wave <input type="checkbox"/> Cuffs <input type="checkbox"/> Crushing <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Marks/Chatter <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	<b>General</b> <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damage/Defect <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drawing <input type="checkbox"/> Drill Holes <input type="checkbox"/> Finish <input type="checkbox"/> Fit/Function	<input type="checkbox"/> Folio/Program <input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete/Unqualified <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Misaligned/off center <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Off-set <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence	<input type="checkbox"/> Outside Dimensions <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge  <input type="checkbox"/> Pressure/Forced Set-up <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other
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